

# Analysis of village fund management in poverty alleviation at Pasaman Regency, West Sumatra

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## Abstract

This research examines the effect of village fund management toward poverty alleviation in Pasaman Regency, West Sumatra. The data of the research were obtained from the Social Service and Regional Government of Pasaman Regency in 2016-2018. The sample of this research is 37 villages at Pasaman Regency in 12 sub-districts. The research was conducted using the panel data regression method. The results showed that each policy area of village fund use in Pasaman Regency was able to reduce poverty simultaneously. Partially from the four research variables, it was found that community development and infrastructure development policies were able to influence the reduction of poverty in Pasaman Regency.

Keywords: Village fund, Poverty, Rural development

**JEL classification:** H53, O18, R51

## INTRODUCTION

To realize the national ideals concerning sustainable development, the Government as a stakeholder of the Indonesian people must be able to determine several of concrete steps and appropriate policies that can shove Indonesia's economic development towards a more positive direction. One form realization of the national ideals' sustainable development is contained in a policy established by the Indonesian government, by issuance the Republic of Indonesia's Law Number 32 Year 2004 about Regional Autonomy. Regional autonomy is the right, authority, and obligation of autonomous regions to regulate and manage their own government affairs and the interests of the local community in accordance with government affairs, and the interests of the local community in accordance with laws and regulations (Law Number 32 Year 2004 Article 1 Number 5).

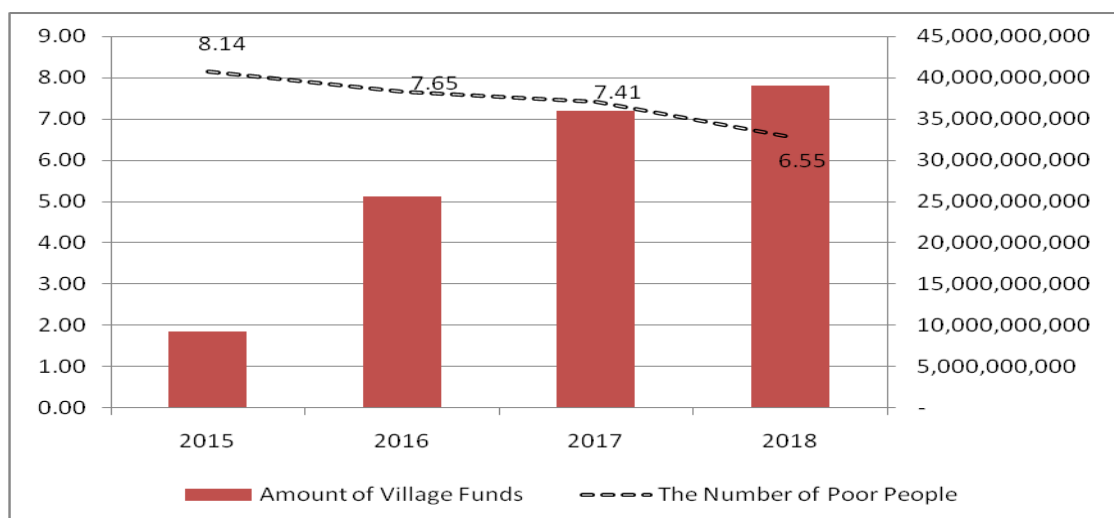
Regional autonomy was born with the aim that each region is able to provide targeted policies to improve community welfare, one form of welfare standards that should be achieved by regional autonomy is reducing poverty. Regional autonomy is the distribution of authority focusing on district/city regional governments, as regulated in the regional government law to realize a good governance in budget management, but essentially it must be understood that independence must begin at the most bottom level of government that is the village, so that regional development should be directed towards empowering rural communities through the village government.

In accordance with *Jokowi's Nawacita* which is to build Indonesia from the periphery by strengthening villages and regions within the framework of a unitary state, village development is realized by the issuance of Law Number 6 Year 2014 which states that 10% of funds are budgeted from the State Budget (APBN) and Regional

Government Budget (*APBD*) for each village. Distribution of village funds began in 2015, becoming an opportunity for the village to become autonomous and independent because with village funds received, the village could become independent and be able to manage its own finances in order to develop the village.

West Sumatra based on data from the Indonesian Central Bureau of Statistics is a province with a total of 928 villages, a village government for the West Sumatra is called *nagari* has also provided meaningful changes in life order of the people of West Sumatra, based on the past history, Minangkabau people have used to know the Village Government, in this case, the *nagari* government, so that with the existence of regional autonomy the people of West Sumatra tend to be better prepared because they re-run the system of government that was once implemented. Since the launch of the Village Fund policy in 2015, West Sumatra has slowly but steadily succeeded in reducing poverty with an average decline by 0.22%.

At the regency level, Pasaman Regency is one of 19 regencies/cities in West Sumatra Province, consisting of 12 districts and 37 *Nagari* that has felt the impact of decentralization from the perspective of poverty reduction, based on data released by the West Sumatra Central Bureau of Statistics, Pasaman Regency since 2015 which is also the first year of village fund policy implementation until 2018, it has been recorded that it can reduce poverty by 1.62%



**Figure 1.** Poor population receipt of village funds in Pasaman Regency in 2015-2018

Source: *Pasaman Regency Central Bureau of Statistics, 2018*

Pasaman Regency Central Bureau of Statistics found that an increase in the number of village funds received by Pasaman Regency was followed by a reduction in the percentage of poor people in Pasaman Regency. From 2015 to 2018, there was an increase in receipt of village funds by 30 billion rupiah, this significant increase in the number of receipts was able to have a positive effect on poverty alleviation in Pasaman Regency. Pasaman Regency Central Bureau of Statistics determined that Pasaman had succeeded in reducing the number of poverty by 1.59%, which was in 2015 amounted to 8.14%, reduced to 6.55% in 2018.

Susilowati & Syamsul (2017) mentioned one of the goals of the Village Fund is as a tool to alleviate poverty and inequality. In its use, 30% of Village Funds are used for operational costs of administering village government and 70% are used for physical development and community empowerment. The existence of a village fund program is expected to have a positive impact not only in infrastructure development but also have a direct effect on reducing poverty rates. *Nagari* at Pasaman Regency, which is located

in West Sumatra Province, is one example of the existence of villages in Indonesia which received funding from the Village Fund program. With characteristics that almost represent the villages in general, village funds are expected to be able to have a real impact on the effectiveness of the use so that it is expected to reduce the poverty rate in Pasaman Regency.

This research aims to determine the extent of the success of the village fund program in Pasaman Regency and to find out how much influence from the village fund policy is able to have a positive effect in reducing poverty in Pasaman Regency, West Sumatra, because basically one of the objectives of the village fund is providing assistance for physical development and empowerment of village communities. With the existence of a village fund program, the target is achieved not only to accelerating the physical development process. It is expected that village human resources is able to carry out more effective and targeted production activities because in the village fund there is a goal of community development aimed at providing job training and work guidance for village communities and in the future it is expected that it will be able to increase individual income so that the poverty rates in the village will automatically decrease.

## **THEORETICAL REVIEW**

### **Fiscal decentralization**

Fiscal decentralization is a process of distributing the budget from a higher level of government to a lower government to support the functions or tasks of government and public services in accordance with the many authorities delegated to the government. According to Khusaini (2006), fiscal decentralization is a delegation of authority on the field of budget or financial receipts that were previously centralized, both administratively and in its use regulated or carried out by the central government.

Madiasmo (2009) argues that fiscal decentralization requires the distribution of authority to the regions in terms of revenue/funding (revenue assignment) that accompanies the assignment of tasks and authority to local governments (expenditure assignment) so that the central and regional financial relations need to be regulated in such a way. Thus, expenditure needs that are the responsibility of the region can be financed from existing revenue sources.

For a country like Indonesia whose geographical condition is a vast archipelago with diverse social and economic conditions. By providing greater financial management responsibilities, it is expected that resource mobilization will be better. Even fiscal decentralization should be able to increase economic growth and public welfare because sub-national governments/local governments will be more efficient in producing and providing public goods (Oates, 2006; Pujiati, 2006).

The implementation of fiscal decentralization in Indonesia began in 2001. Since the implementation of the fiscal decentralization system, there has been a general change of authority in managing expenditure and budget revenues. The regional government has broader authorization in managing its expenditure and revenue, therefore the fiscal decentralization system actually also increases regional authority to plan and control the Regional Government Budget (APBD). Thus, fiscal decentralization will increasingly provide benefits if there are financial capabilities of the autonomous region concerned. According to the Law Number 33 Year 2004 about Financial Balance Between the Central Government and Regional Governments, it states that the sources of regional government revenues in implementing fiscal decentralization are: District Own Source Revenue (PAD), General Allocation Funds (DAU), Specific Allocation Funds (DAK), Revenue Sharing Funds (DBH), regional

loans and other legal receipts. Fiscal decentralization should provide hopes and benefits such as improving public services, high economic growth, alleviating poor people, better macroeconomic management and good governance systems (Kumorotomo, 2008).

### **Village fund**

Further derivatives of fiscal decentralization are village funds, the funds originating from the State Budget that are allocated to villages that are transferred through Regional Government Budget and are used to finance government administration, implementation of development, community development and community empowerment (Based on the Law Number 6 Year 2016 about villages). The purpose of the village fund itself is to accelerate the growth and development of the village in order to overcome the various problems that have existed, to develop the quality and welfare of the community because the quality village communities certainly become useful inputs both for the village itself and other regions and finally increase income distribution and equitable development.

### **Relationship of village funds to poverty**

Village Funds sourced from the State Budget which are allocated to villages that are transferred through the Regional Government Budget are used to fund government administration, implementation of development, community development, and community empowerment. The higher the size of the Village Fund is expected to be able to reduce poverty and even distribution of income so that poverty and inequality will decrease (Susilowati, Dwi, & Syamsul, 2017). This also refers to the purpose of the issuance of Village Fund policies in the "Smart Book Village", are reducing poverty and inequality.

Handra (2016) was explained that the Village Fund greatly contributes to reducing the number of inequality in Indonesia with further effects when inequality has been reduced and will have a positive impact on reducing the number of poor people. Setianingsih (2016) also found a similar thing, village funds proved to be able to affect poverty reduction in Malawi District. The acceleration of infrastructure development will encourage effectiveness in production so that it will provide an internal impetus to increase income, this will certainly make families defined as poor families able to get out from the circle of poverty.

Besides having a direct influence on the development of infrastructure, village funds are also targeted at empowering and fostering rural communities which in practice the purpose of using village funds in this field is to encourage the improvement of the quality of human resources in the village itself. With the change in the quality structure of human resources in the village, it is expected that the ability of rural communities to produce will be more effective and effective so that it can produce further efficiency which will have an effect on increasing per capita income. Increased income can provide final conclusions, namely the achievement of village fund policy targets in terms of poverty alleviation.

Village funds are expected to be able to give a direct contribution to improving the quality of community life because the village funds are independently capable of empowering the community so that the quality of the existing human resources in the village increases. Furthermore, this will encourage the productivity of the village community because Modern economic theories that find the quality of human resources are the driving factor of productivity.

## METHODS

This research uses data sourced from regional agencies in Pasaman Regency such as poverty data measured using the Family Registers (KK) of poor population in Pasaman that obtained from the Integrated Data Base (BDT) of Pasaman Social Services and village fund data for 2016-2018 obtained from the Regional Government of Pasaman Regency.

The sample in this research was 37 *nagari* in 12 districts in Pasaman Regency with the observation period for three years from 2016 to 2018. The model in this research was adopted from the research conducted by Setianingsih (2016). The research model was formed as follows:

$$Poverty_{it} = \beta X_{1it} + \beta X_{2it} + \beta X_{3it} + \beta X_{4it} + \varepsilon$$

Where X1 is village funds used for community empowerment in Pasaman Regency, X2 is village funds used for Community Development, X3 is a variable of village funds used for village development and finally X4 is village funds for the administration of village government, representing errors model calculations in components X1, X2, X3, and X4.

To find out how each policy from the use of village funds is able to influence poverty in the villages in Pasaman Regency, the panel data regression method was used in this research.

## RESULTS AND DISCUSSION

### Poor households in Pasaman Regency, West Sumatra

In 2018, there were 34,167 poor people in Pasaman Regency. Compared to the number in 2016 which was 38,849 households, there had been a decrease of 6.03 per year. However, out of 12 sub-districts, only four sub-districts experienced a decline, with the highest decline in Padanggelugur sub-district by 31.56 percent per year. Eight sub-districts experienced an increase in poor households' number with the largest increase in Panti sub-district by 4.34 percent per year (Table 1).

A similar condition is also seen at the level of *nagari*. Of the 37 *nagari*, only 11 *nagari* experienced a decrease in poor households' number, with the highest decline in *Nagari* Bahagia by 44.19 percent per year. Conversely, 26 other *nagari* per experienced an increase in the number of poor households with the largest increase in *Nagari* Panti by 27.05 percent per year (see appendix 1).

**Table 1.** Poor households in Pasaman Regency, West Sumatra, 2016 - 2018

No.	Sub-districts	No. of villages	Year			Growth per year (%)
			2016	2017	2018	
1	Bonjol	4	3,271	3,303	3,304	0.50
2	Tigo Nagari	3	2,973	3,086	3,046	1.23
3	Simpang Alahan Mati	2	1,589	1,610	1,638	1.54
4	Lubuk Sikaping	6	3,510	3,734	3,730	3.13
5	Duo Koto	2	5,550	5,583	5,554	0.04
6	Panti	3	3,778	4,249	4,106	4.34
7	Padang Gelugur	4	8,409	3,090	3,101	-31.56
8	Rao	2	2,143	2,213	2,224	1.89
9	Mapat Tunggul	3	1,708	1,741	1,599	-3.19
10	Mapat Tunggul Selatan	2	1,625	1,643	1,609	-0.49
11	Rao Selatan	3	2,485	2,558	2,486	0.02
12	Rao Utara	3	1,808	1,822	1,770	-1.05
Total		37	38,849	34,632	34,167	-6.03

Source: Integrated Data Base (BDT) of Pasaman Social Services

### Village funds in Pasaman Regency, West Sumatra

The average village funds that had been channeled in Pasaman Regency, West Sumatra in 2018 were Rp 1.975 million per village. It had been increased by Rp 229 million if it is compared to the number of village funds in 2016 that was IDR 1.747 million (Table 2).

**Table 2.** Village Funds in Pasaman Regency, West Sumatra, 2016 – 2018 (IDR Million)

Allocation	2016		2017		2018	
	IDR	%	IDR	%	IDR	%
Village development	1456	83.34	1603	78.72	1490	75.45
Rural community empowerment	207	11.85	264	12.98	323	16.37
Fostering of the rural community	40	2.31	121	5.94	117	5.92
Government administration	44	2.50	48	2.36	45	2.26
Total	1747	100.00	2037	100.00	1975	100.00

*Source: Regional Government of Pasaman Regency.*

Increasing the receipt of Village Funds which increases every year is expected to reach the level of welfare of the community every year. This certainly needs to be followed by improving the quality of users who use the aid funds so that the realization targets are expected to be achieved.

In achieving the government's development goals, to build Indonesia from the periphery and realize the regional autonomy policy, village funds are one of Indonesia's sustainable development solutions that focus on the country's development from the lowest level, namely the village. In practice the village fund program itself has been running for 5 years from 2015 to the present, high expectation for the success of the program is certainly the responsibility of the village funds user that transferred from the center to the regions.

The village funds are allocated for the use of village development, rural community empowerment, fostering of the rural community, and government administration. In 2018, by average, allocation of village development was IDR 1.490 million (75.45 percent), allocation of rural community empowerment was IDR 323 million (16.37 percent), funds for fostering of rural community was IDR 117 million (5.92 percent), and funds for village development was IDR 45 million (2.26 percent). Compared to the condition in 2016, there was a decline in allocation for village development and government administration, but an increase in funds for empowering the rural community and fostering rural community.

In the field of village development, the realization of the use of village funds intended for development has the highest proportion in terms of budget use. It is expected that village development will be faster so that the level of welfare of the village community will increase and further it is expected to provide encouragement or motivation to be more productive in the future.

In terms of empowering rural communities, village funds transferred from the central government to village governments obtain a smaller proportion compared to the rural development sector. This is explained because the main focus of the use of village funds is for the development of the village then to develop the quality of human resources. The use of village funds in the field of community empowerment is expected to encourage the improvement of the quality of rural community human resources through training so that the village community is more effective and efficient in producing.

The realization of the use of village funds for the development of rural communities in Pasaman Regency from 2016 to 2018 has proceeded as it should. Even though the budget spent is not as big as other fields, the value is expected to be able to provide a positive effect in terms of fostering rural communities to be more effective in producing in the future.

### **Influence of village funds management on poverty alleviation in Pasaman Regency**

The first step in selecting a panel data regression model is to regress panel data using Pooled Least Squared (PLS), Fixed Effect (FEM) and Random Effect (REM) models as shown in Table 3

**Table 3.** Estimated Result of PLS, FEM and REM

Research Variable	PLS	FEM	REM
Implementation of Village Government Sector	0.338906	0.015512	0.086731
Development of Village Government Sector	0.045880	- 0.062674*	-0.058677
Village Community Empowerment Sector	-0.013313	- 0.163220	-0.115715
Village Community Development Sector	0.525045**	- 0.232499*	0.016109
C	-11.185717	1.559.188	7.901.634
R-squared	0.133917	0.886027	0.035629
F-statistic	4.097.538	1.360.448	0.979039
Prob(F-statistic)	0.003972	0.000000	0.422274

Significant at level \* = 5%, \*\* = 1% (see the output details in appendix 2 - 4)

Pooled Least Square is the easiest way to regression the combination of cross-section data and time series data. It is the simplest panel data model approach because it only combines time series data and cross section. In this model, the time and individual dimensions are not considered, so it is assumed that the data behavior is the same in various time periods. This method can use the Ordinary Least Square (OLS) approach or the least squares technique to estimate the panel data model.

Fixed Effect Model is a regression that includes dummy elements into the panel data model. Fixed Effect Model is generally used when N is relatively smaller and T is relatively larger. FEM estimates that there is an omitted bias variable that allows influencing the intercept time series or cross-section. This model assumes that differences between individuals can be accommodated from the difference in intercepts. To estimate the Fixed Effects panel data using a variable dummy technique to capture the difference in intercepts between cross-section data, intercept differences can occur due to differences in the internal conditions of the area concerned. However, the slop is the same between the cross-section regions. This estimation model is often also called the Least Squares Dummy Variable (LSDV) technique.

To choose the most appropriate model between the two models above, then the Likelihood Ratio test is carried out. The chow test is one of the tests used to determine the best model between Pooled Least Square and Fixed Effect Model. This test is done by comparing the F-count and F-statistic values. The F test is used to test all variables at once or multiple as the explanatory dependent variable. If  $\text{prob} > F > \alpha 0.05$  then  $H_0$  is accepted (not significant), meaning that the Pooled Least Square model is better than the Fixed Effect Model. If  $\text{Prob} > F < \alpha 0.05$  then  $H_0$  is rejected (significant), meaning that Fixed Effect Model is better than Pooled Least Square. The results of the Likelihood Ratio (Chow Test) test can be seen in Table 4.

**Table 4.** Test of likelihood ratio

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.831390	(36,70)	0.0000
Cross-section Chi-square	225.109857	36	0.0000

Based on the results of Likelihood Ratio test above which states that the model following the Pooled Least Squared was rejected, because of the Prob. Cross-section  $F < 0.05$ . Therefore the more appropriate model chosen is the Fixed Effect model.

Random Effect Model is a model that calculates errors from time series and cross sections in panel data analysis. Random Effect Model is generally used when N is relatively larger and T is relatively smaller. In general, the approach used to predict Random Effect Model is generalized least square (GLS). To choose the most appropriate model between Fixed Effect and Random Effect, a Hausman Test is performed. Table 5 is the result of the Hausman test.

**Table 5.** Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	44.140306	4	0.0000

Hausman test is also one of the statistical tests to determine which is better between Fixed Effect Model and Random Effect Model to use. The way to determine the best model of the Hausman Test is to look at chi square ( $X^2$ ). The suitability test of the panel data model between Fixed Effect Model and Random Effect Model using the Hausman test shows the p-value  $X^2$  (prob.) Value  $< \alpha 5\%$ . If  $\text{prob} > F > \alpha 0.05$  then  $H_0$  is accepted (not significant), meaning that the Random Effect Model is better than the Fixed Effect Model. If  $\text{Prob} > F < \alpha 0.05$  then  $H_0$  is rejected (significant), meaning that Fixed Effect Model is better than Random Effect Model.

Based on the results of the Hausman test in Table 5 above, the most appropriate model to be used in this study is the Fixed Effect model, because of the Prob. Random cross-section  $> 0.05$ .

After estimated using the panel data regression method and the selected model selection test, the Fixed Effect model was used as the best model that was able to explain how the influence of each village fund use policy on poverty alleviation efforts in Pasaman Regency.

Based on the results of the Fixed Effect model, it was found that every policy area in the use of village funds in Pasaman was able to provide a reduction in poverty in Pasaman Regency. The entire model explains the reduction in poverty in Pasaman Regency by 88,6%. If partially seen, community empowerment policies are able to influence the poverty rate in Pasaman Regency as evidenced by a small prob value of a significance level of 5%, the coefficient value of the variable community empowerment policy also shows a negative value of -0.036483 which means that every budget increase for community empowerment villages in Pasaman Regency will provide a reduction of poverty in Pasaman by 3.6%.

Good results that are in line with expectations are also found in the village fund policy in the village development community, which in this finding showed significant value for changes in the value of poverty in Pasaman Regency, this was evidenced by a small significance value of 5% significance level and regression coefficient. Negative value of -0.232499 means each increase in budget for infrastructure development in villages in Pasaman Regency by 1% is also able to reduce poverty in Pasaman Regency by 23.25%. Effective development will be able to provide an impetus for effectiveness and efficiency in the productivity of society and this is what is currently felt by the people of Pasaman Regency. The direction of development that is in accordance with the needs of the community is able to increase the impetus to obtain increased income which further will have an effect on poverty reduction.



There are differences in results found in this research if compared with previous one conducted by Setianingsih (2016). In Melawi Regency in 2016, Setianingsih found that infrastructure development had not been properly targeted for the use of village budget funds, so the results were found instead of reducing poverty but vice versa. The use of village funds for fostering village communities in Melawi Regency also has a less significant effect in reducing poverty in Melawi Regency, although the simultaneous model used by Setianingsih (2016) is said to be able to reduce poverty statistically, but partially if seen for each use of village funds in accordance with the policy of using the expected results that cannot yet be obtained. This result can be said to be reasonable because basically, the village fund policy is a policy that is only 1 year old when viewed at the time of the research conducted by Setianingsih (2016).

Village funds for the field of village administration were found to be insignificant in reducing poverty in Pasaman Regency in the study. This is because the use of the Village Fund in this field is more operational in nature and only for supporting activities, and the amount is also relatively very little of the percentage of Village Fund usage in each village.

The allocation of village funds used for community development in Pasaman Regency in this study was found to be significant and able to have an effect on poverty reduction. It can be concluded that the use of Village Funds for community development in Pasaman Regency is right on target. This is part of an effort to realize the vision of the Pasaman Regency Government.

Village funds for the field of community empowerment in this study were found to be insignificant in poverty in Pasaman Regency. For community development to be more empowered and independent, less attention is given by the average *nagari* government in Pasaman Regency. *Nagari* is more focused on this empowerment program through programs that are in the APBD or APBN which are technically implemented in the Regional Devices Organization.

The use of the Village Fund budgeted for infrastructure development in Pasaman District was found to be significant and able to influence poverty reduction.

With a percentage of more than 50% of Village Funds directed towards rural development, it has been proven to be true of overall poverty reduction in Pasaman District.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The village fund policy that was only three years old had begun to have an impact on reducing poverty in Pasaman Regency. Although it is not so large and not all forms of policy capable of influencing poverty reduction, these results should be appreciated because basically development policies from government aid funds have a tendency to have long-term effects but for village funds within three years, they have been able to provide a reduction of numbers poverty in Pasaman Regency.

Simultaneously these three types of village fund use are jointly found to have an effect on poverty reduction. The model of this research was found to have an effect on poverty as much as 88.6%, the remaining influenced by other models outside of the observation.

### Recommendations

For four years since the Village Fund was distributed to each village in Pasaman district, it still had not contributed significantly to poverty alleviation in Pasaman

district, even though the purpose of the Village Fund was disbursed to alleviate poverty. This is due to the inadequacy of the village head and the lack of experts who are able to normalize the appropriate village budget. Such as balanced infrastructure development and human resource development so that later prosperity can be achieved.

In addition to focusing on infrastructure development, village funds are also expected to have a focus on the development of human resources themselves, so in addition to encouraging facilities in village, the village is also able to improve the quality of rural community human resources so that the productivity of village communities can be better.

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**Appendix 1.** Poor population based on *nagari* (villages) and sub-districts in Pasaman Regency

No.	Subdistricts	Nagari (Villages)	Number of household			Growth per year (%)
			2016	2017	2018	
1	Bonjol	Koto Kaciak	858	870	869	0.64
2		Limo Koto	754	762	758	0.27
3		Ganggo Hilia	990	1,001	985	-0.25
4		Ganggo Mudiak	669	670	692	1.72
5	Tigo Nagari	Binjai	794	812	821	1.70
6		Ladang Panjang	1,049	1,094	1,064	0.71
7		Malampah	1,130	1,180	1,161	1.37
8	Simpang Alahan Mati	Alahan Mati	652	656	678	1.99
9		Simpang	937	954	960	1.23
10	Lubuk Sikaping	Tanjung Beringin	606	640	653	3.88
11		Jambak	276	277	278	0.36
12		Durian Tinggi	334	334	335	0.15
13		Pauah	315	319	317	0.32
14		Aia Manggih	1,219	1,247	1,240	0.86
15		Sundata	760	917	907	9.67
16	Duo Koto	Cubadak	2,992	3,014	2,986	-0.10
17		Simpang Tonang	2,558	2,569	2,568	0.20
18	Panti	Panti	804	1,282	1,239	27.05
19		Panti Timur	1,590	1,378	1,277	-9.84
20		Panti Selatan	1,384	1,589	1,590	7.44
21	Padang Gelugur	Padang Galugua	1,203	1,342	1,351	6.15
22		Sitombol	1,684	802	796	-26.37
23		Bahagia	3,261	381	379	-44.19
24		Sontang Cubadak	2,261	565	575	-37.28
25	Rao	Taruang-Taruang	1,435	1,456	1,453	0.63
26		Padang Mantinggi	708	757	771	4.45
27	Mapat Tunggul	Lubuak Gadang	289	292	293	0.69
28		Pintu Padang	373	375	360	-1.74
29		Muaro Tais	1,046	1,074	946	-4.78
30	Mapat Tunggul Selatan	Muaro Sei Lolo	1,085	1,097	1,062	-1.06
31		Silayang	540	546	547	0.65
32	Rao Selatan	Lansek Kadok	683	705	692	0.66
33		Tanjung Betung	1,092	1,121	1,117	1.14
34		Lubuak Layang	710	732	677	-2.32
35	Rao Utara	Koto Nopan	600	604	601	0.08
36		Koto Rajo	613	619	576	-3.02
37		Languang	595	599	593	-0.17
Jumlah			38,849	34,632	34,167	-6.03

**Appendix 2.** The results of pooled least squared model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Implementation of Village Government Sector	0.338906	0.193858	1.748218	0.0833
Development of Village Government Sector	0.045880	0.083793	0.547542	0.5852
Village Community Empowerment Sector	-0.013313	0.138671	-0.096003	0.9237
Village Community Development Sector	0.525045	0.204682	2.565178	0.0117
C	-11.85717	4.753418	-2.494451	0.0142
R-squared	0.133917	Mean dependent var		6.714416
Adjusted R-squared	0.101235	S.D. dependent var		0.568482
S.E. of regression	0.538939	Akaike info criterion		1.645572
Sum squared resid	30.78831	Schwarz criterion		1.767623
Log likelihood	-86.32924	Hannan-Quinn criter.		1.695084
F-statistic	4.097538	Durbin-Watson stat		0.648908
Prob(F-statistic)	0.003972			

**Appendix 3.** The result of fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Implementation of Village Government Sector	0.015512	0.045936	0.337677	0.7366
Development of Village Government Sector	-0.062674	0.018828	-3.328713	0.0014
Village Community Empowerment Sector	-0.163220	0.088554	-1.843167	0.0695
Village Community Development Sector	-0.232499	0.075423	-3.082597	0.0029
C	15.59188	1.356653	11.49290	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.886027	Mean dependent var		6.714416
Adjusted R-squared	0.820899	S.D. dependent var		0.568482
S.E. of regression	0.240583	Akaike info criterion		0.266204
Sum squared resid	4.051626	Schwarz criterion		1.267021
Log likelihood	26.22569	Hannan-Quinn criter.		0.672206
F-statistic	13.60448	Durbin-Watson stat		2.176989
Prob(F-statistic)	0.000000			

**Appendix 4.** The result of random effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Implementation of Village Government Sector	0.086731	0.108339	0.800556	0.4252
Development of Village Government Sector	-0.058677	0.045653	-1.285280	0.2015
Village Community Empowerment Sector	-0.115715	0.073960	-1.564547	0.1207
Village Community Development Sector	0.016109	0.136089	0.118370	0.9060
C	7.901634	3.209057	2.462292	0.0154
Effects Specification				
		S.D.		Rho
Cross-section random		0.365663		0.6979
Idiosyncratic random		0.240583		0.3021
Weighted Statistics				
R-squared	0.035629	Mean dependent var		2.384312
Adjusted R-squared	-0.000763	S.D. dependent var		0.282379
S.E. of regression	0.282487	Sum squared resid		8.458655
F-statistic	0.979039	Durbin-Watson stat		1.115773
Prob(F-statistic)	0.422274			
Unweighted Statistics				
R-squared	-0.038372	Mean dependent var		6.714416
Sum squared resid	36.91299	Durbin-Watson stat		0.255681